

CLAIMS

What is claimed is:

1. A memory module comprising:
a plurality of memory devices; and
5 at least one non-volatile storage device storing data indicating a location of at least one
failed part associated with at least one of the plurality of memory devices.

2. The memory module of claim 1, wherein the at least one non-volatile
storage device is one of an EEPROM, an EPROM, a ferro-electronic device and a flash
10 memory chip.

3. The memory module of claim 1, wherein the at least one failed part
comprises at least one failed output.

4. The memory module of claim 1, wherein at least a portion of the plurality
15 of memory devices are fully functional dice.

5. A computer system comprising:
a processor; and
20 a memory module comprising:
a plurality of memory devices; and
a non-volatile storage device storing data indicating the location of at least one
failed part associated with at least one of the plurality of memory devices.

6. The computer system of claim 5, wherein the at least one non-volatile
storage device is at least one of an EEPROM, an EPROM, a ferro-electronic device and a
flash memory chip.

7. The computer system of claim 6, wherein the at least one failed part
30 comprises at least one failed output.

8. The method of claim 5, wherein at least a portion of the plurality of memory devices are fully functional dice.

5 9. A method of testing a memory module, the method comprising:
testing a memory module including a plurality of memory devices thereon;
identifying data indicative of the locations of at least one failed part associated with at
least one of the plurality of memory devices; and
storing the data on the memory module.

10 10. The method of claim 9, wherein storing data of at least one failed part
includes storing identification of at least one failed output.

15 11. The method of claim 9, wherein storing identification of each failed output
further comprises storing data in at least one non-volatile storage device on the memory
module.

20 12. The method of claim 11, further comprising selecting the at least one non-
volatile storage device from at least one of an EEPROM, an EPROM, a ferro-electronic
device and a flash memory chip.

25 13. The method of claim 9, further comprising accessing the stored data and
identifying a location of at least one of the plurality of memory devices including at least
one failed part.

14. The method of claim 13, further comprising repairing or replacing
memory devices on the memory module identified as having at least one failed part.

15. A method of fabricating a memory module, the method comprising:
placing a plurality of memory devices on a memory module substrate;
testing each of a plurality of elements associated with each of the plurality of memory
devices on the memory module; and
5 storing data indicative of a location of at least one memory device including at least one
element which failed a test.

16. The method of claim 15, further comprising subsequently accessing the
stored data indicative of a location of at least one memory device including at least one
10 element which failed a test.

17. The method of claim 16, further comprising identifying at least one
memory device having at least one failed element and repairing or replacing the at least
one identified memory device on the memory module.

18. The method of claim 17, further comprising testing the at least one
repaired or replaced memory devices on the memory module.

19. The method of claim 15, wherein storing data indicative of a location of at
least one memory device including at least one element which failed a test includes
20 storing data indicative of at least one failed output.